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THE DELETION OF *CAREX STIPATA* (CYPERACEAE) FROM THE TEXAS FLORA

[1]Stanley D. Jones, [2]Gretchen D. Jones, & [1] Stephan L. Hatch

[1]S.M. Tracy Herbarium, Department of Rangeland Ecology and Management, Texas A&M University, College Station, Texas 79843 U.S.A
[2]Department of Biology, Texas A&M University, College Station, Texas 79843 U.S.A

ABSTRACT

There are two species of *Carex*, subgenus *Vignea*, section *Vulpinae* Kunth in Texas, *Carex crus-corvi* Shuttlw. ex Kunze and *Carex oklahomensis* Mackenzie. *Carex stipata* Muhl. ex Willd. was found not to occur in Texas. *Carex crus-corvi* has the widest distribution in Texas, being found in the eastern one-half of the state ranging westward to Brown County, southward to Nueces County, and northwestward to Wichita County. *Carex oklahomensis* has only been documented in the northeastern part of the state in Camp, Cherokee, Nacogdoches, Smith, Titus, and Wood counties.

KEY WORDS: *Carex, Carex crus-corvi, Carex oklahomensis, Carex stipata*, section *Vulpinae*, Cyperaceae, Texas

Subgenus *Vignea*, section *Vulpinae* are species of swampy sites. Eleven are widely distributed in North America with only two in Texas. Four are found in southern Africa and the highlands of eastern Africa, one in Europe and western Asia extending into northern Africa, and one in southern Australia (Mackenzie 1931).

Characteristics of this section are: stigmas 2; achenes lenticular (2 sided); spikes androgynous or pistillate, but never gynaecandrous; lateral spikes sessile; sheaths usually either transversely rugose or dotted with erythrocyanins ventrally; perigynia planoconvex, appressed-ascending, stipitate, conspicuously many nerved dorsally, strongly to nerveless ventrally, conspicuously beaked; beak usually serrate and bidentate.

Cory & Parks (1937) listed *Carex crus-corvi* Shuttlw., *C. oklahomensis* Mackenzie, and *C. stipata* Muhl. var. *maxima* Chapm. as occurring in Texas.

Correll & Johnston (1970) listed *C. crus-corvi* Kunze and *C. stipata* Muhl. as occurring in Texas. In their species description of *C. stipata* they included var. *maxima* Chapm. They stated "*C. stipata* and *C. muhlenbergii* Schkuhr *ex* Willd. (especially the form '*C. lunelliana*') have apparently hybridized in the past; some of the products have been called *C. oklahomensis* or *C. stipata* var. *oklahomensis* (Mackenzie) Gleason." Gould (1975) listed *C. crus-corvi* Shuttlw., *C. oklahomensis* Mackenzie, and *C. stipata* Muhl. var. *maxima* Chapm. as occurring in Texas. Hatch, *et al.* (1990) listed *C. crus-corvi* Kunze and *C. stipata* Muhl. *ex* Willd. var. *stipata* as occurring in Texas.

Cory & Parks (1937) and Gould (1975) acknowledged *C. oklahomensis* as being in our flora whereas Hatch, *et al.* (1990) did not. Correll & Johnston (1970) acknowledged its occurrence in our flora but opted not to recognize this taxon at any taxonomic level. There was complete agreement amongst these authors that *C. crus-corvi* and *C. stipata* occurred in our flora.

Herbarium studies provided insights to which taxa occur in Texas and to their distinctness. Field studies provided habitat information about these taxa and defined their distributional ranges in Texas. Literature review helped define species, since we were unsuccessful at locating type specimens, define previously reported distributional ranges, and resolve the problem of author citation.

METHODS AND PROCEDURES

This report was based on field studies and herbarium specimens. Herbarium specimens were examined from the following herbaria: (acronyms follow Holmgren, *et al.* 1981) ASTC, MO, NA, NLU, SHST, SMU, SWT, TAES, TAMU, TEX, and US. Texas specimens of *Carex crus-corvi, C. oklahomensis*, and *C. stipata* were requested for study. We received no specimens labeled *C. oklahomensis*, about 25 specimens labeled *C. stipata*, and approximately 300 specimens labeled *C. crus-corvi.* Field trips to east, southeast, northeast, and central Texas were conducted from 1988 to 1990 to supplement distribution and habitat records.

RESULTS AND DISCUSSION

All specimens labeled *Carex crus-corvi* were found to be identified correctly. Most specimens labeled *C. stipata* were found to be *C. crus-corvi.* A few specimens identified as *C. stipata* were *C. oklahomensis. Carex oklahomensis* was found to be a distinct taxon. *Carex stipata* var. *stipata* and *C. stipata* var. *maxima* were not represented in the Texas specimens examined. It is still possible that *C. stipata* occurs in Texas, however, we found no vouchers of this species from Texas nor have we found it in the field. Without a verified specimen of this taxon we suggest it be deleted from the species lists of our flora.

Carex oklahomensis and *C. crus-corvi* are heliophytes. They are most frequently found growing in full sun. However, on occasion, they can be found growing in partial shade. Both were always growing in shallow standing water or in wet ground that was previously covered with water.

The following key will separate *Carex crus-corvi, C. oklahomensis*, and *C. stipata* (including var. *stipata* and var. *maxima*). Mature specimens should be used in making determinations. *Carex stipata* is included in this key although it is not found in Texas. The correct authority for *C. crus-corvi* is Shuttlw. *ex* Kunze and for *C. stipata* Muhl. *ex* Willd.

KEY TO SECTION *VULPINAE* OF TEXAS INCLUDING *CAREX STIPATA*

1. Ventral leaf sheath margins with orange-red dots; achenes ovate-lanceolate; perigenial wall adhering to achene. .... *C. crus-corvi*

1′ Ventral leaf sheath margins without orange-red dots; achenes broadly ovate; perigenial wall little to not at all adhering to achene.

  2. Dorsal leaf sheath dark blue-green with conspicuous white dots without conspicuous septate nodules; ventral leaf sheath not transversely rugulose. .... *C. oklahomensis*

  2′ Dorsal leaf sheath beige to light stramineous or light olive with conspicuous green septate nodules; ventral leaf sheath transversely rugulose. .... *C. stipata*

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